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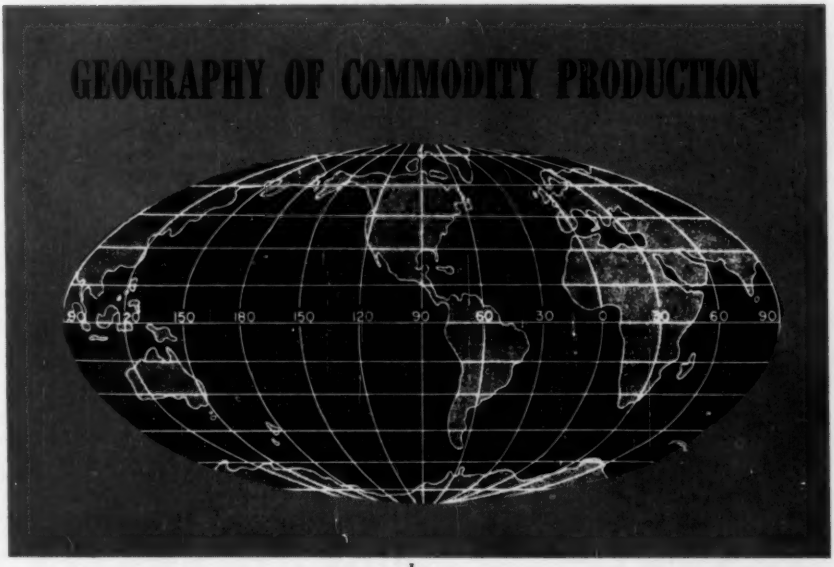

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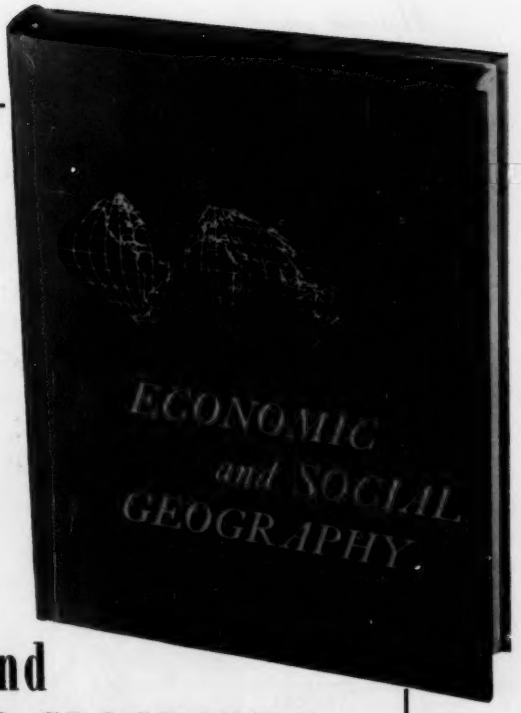

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VOLUME LVII APRIL 1958 NUMBER 4

THE HUDSON BAY RAILWAY ROUTE: A GEOGRAPHICAL RECONNAISSANCE*

E. WILLARD MILLER
The Pennsylvania State University

The economic development of the Canadian subarctic has long been retarded. Largely because of environmental handicaps, the resources of more accessible areas have been intensively exploited first. As the world's demand for raw materials has risen and with growing depletion of early centers of exploitation, the resources of the isolated areas of the subarctic are now being sought. The development of these regions, however, can only occur as transportation is provided. For many subarctic areas, such as the Ungava iron ore district of Quebec-Labrador, new transportation facilities must be constructed. In contrast, the Hudson Bay Railway, extending from The Pas to Churchill, Manitoba, completed in 1929 to provide a northern ocean outlet for exporting the grains of the Prairie Provinces, is becoming the focus for the development of the resources of northern Manitoba. It is the purpose of this paper to analyze present and potential economic developments along the Hudson Bay Railway route.

THE PAS

The Pas, the southern terminus of the Hudson Bay Railway, is one of the major urban centers in the pioneer fringe of central Canada (Fig. 1).[1] Prior to the development of the railroad, The Pas was an Indian settlement and isolated fur trading post. Today it is the economic capital of northern Manitoba. Almost without exception, the lumber, fish, minerals, and furs produced in subarctic

* The writer wishes to express his appreciation for aid granted by the College of Mineral Industries of The Pennsylvania State University for field work and valuable cartographic assistance from Joseph Gregory, research graduate assistant.

[1] The population of the Pas in 1956 was 3,971.

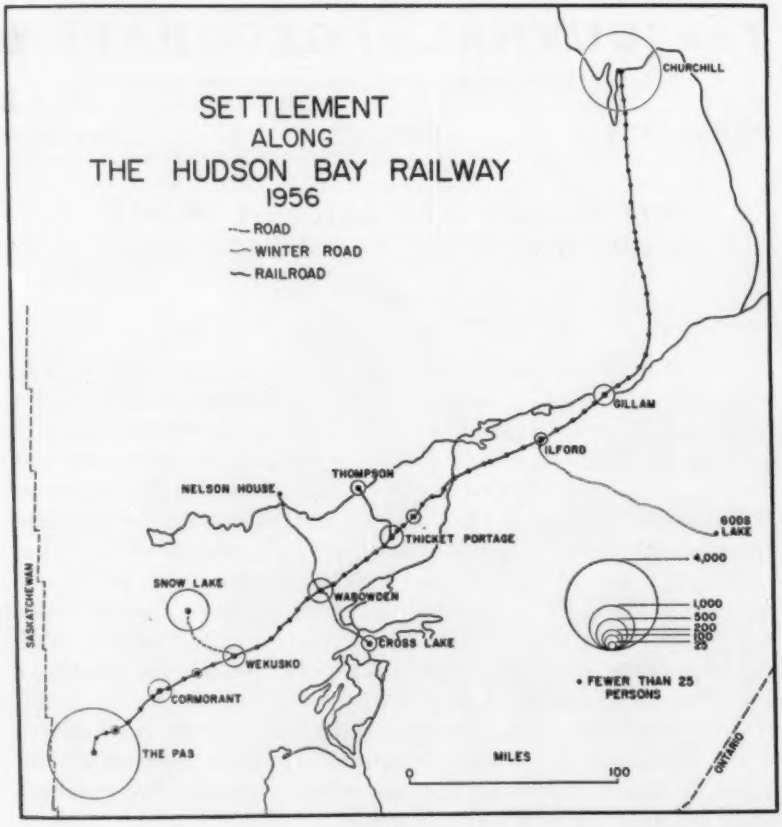

Fig. 1

Manitoba, as well as the men and equipment necessary to pursue these activities, are funnelled thru this town.

Trapping is one of the traditional means of livelihood in this area. The thousands of square miles of muskeg country, dotted with hundreds of lakes, provide a natural habitat for the muskrat, beaver, mink, weasel, wolf, fox, bear, and squirrel. Registered trap lines extending from The Pas into the North Country provide $200,000 to $300,000 annual income and a livelihood for 500 to 550 trappers. Because of uncontrolled exploitation, the fur bearing animals were greatly depleted by the late 1930's. To stabiiize the industry, the Manitoba government has established two animal re-

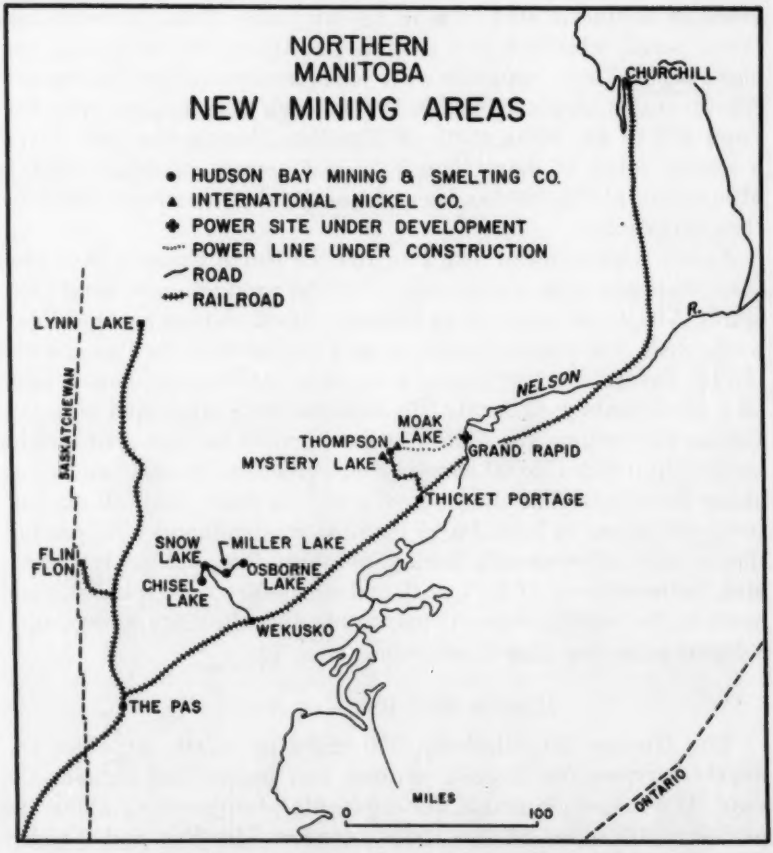

FIG. 2 New mining areas of Northern Manitoba

habilitation areas in the Summerberry and Saskeram marshes to the east of The Pas.

There are no mineral developments in the immediate The Pas area, but because of its strategic location, the provincial Mines Recorders Office for northern Manitoba is located here. A number of companies which supply food, materials and services for the development and maintenance of northern mining enterprises have offices and warehouses in The Pas (Fig. 2). Mine brokers and insurance agents are also located here.

Commerical fishing activities have developed rapidly on the

lakes of northern Manitoba in recent years. Pike, pickerel, lake trout, perch, whitefish, and saugers are among the important species caught. Two companies with headquarters in The Pas operate tractor trains, airplanes and motor launches over an area extending from 350 to 400 miles north of The Pas. During the past decade a yearly catch of more than 4,250,000 pounds of fish valued at $700,000 to $1,000,000 has been shipped out of northern Manitoba thru this center.

As the population of The Pas and the North Country increased there has been a growing demand for the production of local foodstuffs. As a consequence, a small agricultural district has developed to the west. The best agricultural land lies between the Pasquia and Carrot Rivers. By 1949, there were over 5,000 acres in cultivation on approvimately 80 farms. Because the best farm land was also subject to flooding, the Manitoba government in 1953 sponsored a project to drain 135,000 acres by construction of dams and dikes along the rivers. The drained area will be ready for full agricultural settlement in 1959. Dairy farming predominates with production of such crops as oats, barley, potatoes, flax, and hardy vegetables. In the summer of 1957, milk and vegetables were being shipped north to the mining areas. As marketing difficulties are solved, agricultural activities should increase.

Hudson Bay Railway Route

The Hudson Bay Railway, 510 miles in length, provides triweekly services for freight, express and passengers thruout the year. The major economic developments are occurring along the southern 200 miles of the route between The Pas and Thicket Portage. The northern 300 miles is still largely virgin country.

The Pas to Thicket Portage. From The Pas to Thicket Portage four towns have evolved as major transportation nodes to serve the surrounding country (Fig. 1). Cormorant, mile 42, is the first major settlement along the railway.[2] The population is mixed, consisting largely of descendants of French and Scottish settlers many of whom have intermarried with the Indians of the area. There are also settlers from central Europe. The economic activities of the settlement center on fishing and exploitation of the pulpwood resources. The village is the local headquarters of the Cormorant Provincial Forest and the newly established Forest Reserve. Altho

[2] The location of the villages is given in miles from The Pas.

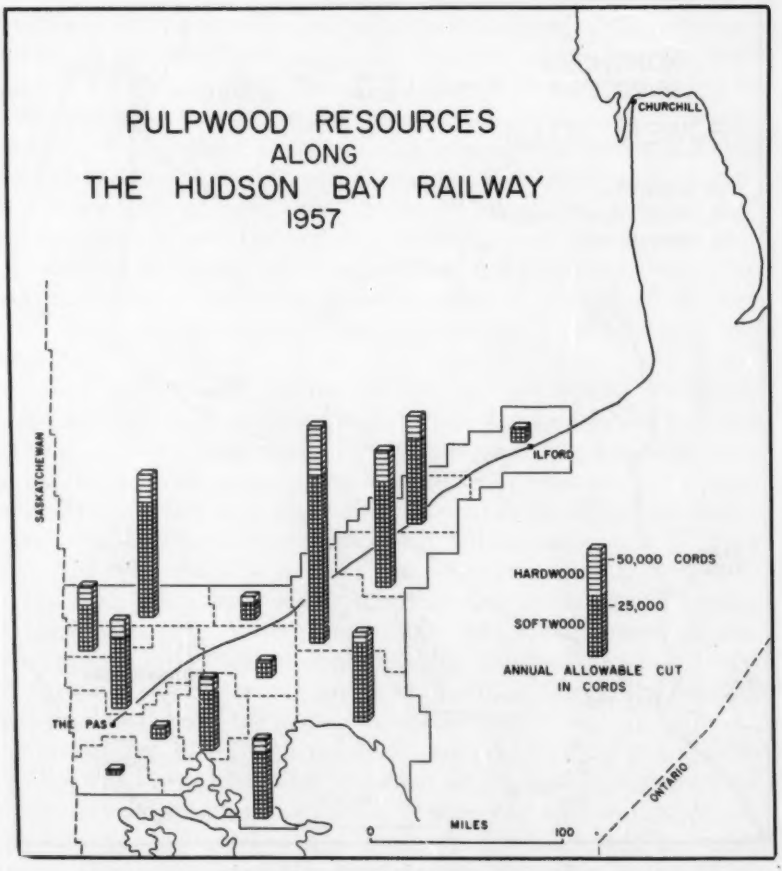

FIG. 3

the black spruce, Jack pine, aspen, oak, ash and tamarack forests along the railway are in an initial state of exploitation outside the The Pas district, the area possesses a combination of economic factors favorable to greater future development. These include a sufficient supply of wood to cut 588,900 cords per year according to recently completed timber inventories by the Forest Branch of the Department of Mines and Natural Resources (Fig. 3). Present annual production is about 10 per cent of this potential cut. A reliable source of labor from Indian reserves is available in the region. An adequate supply of potential hydroelectric power is

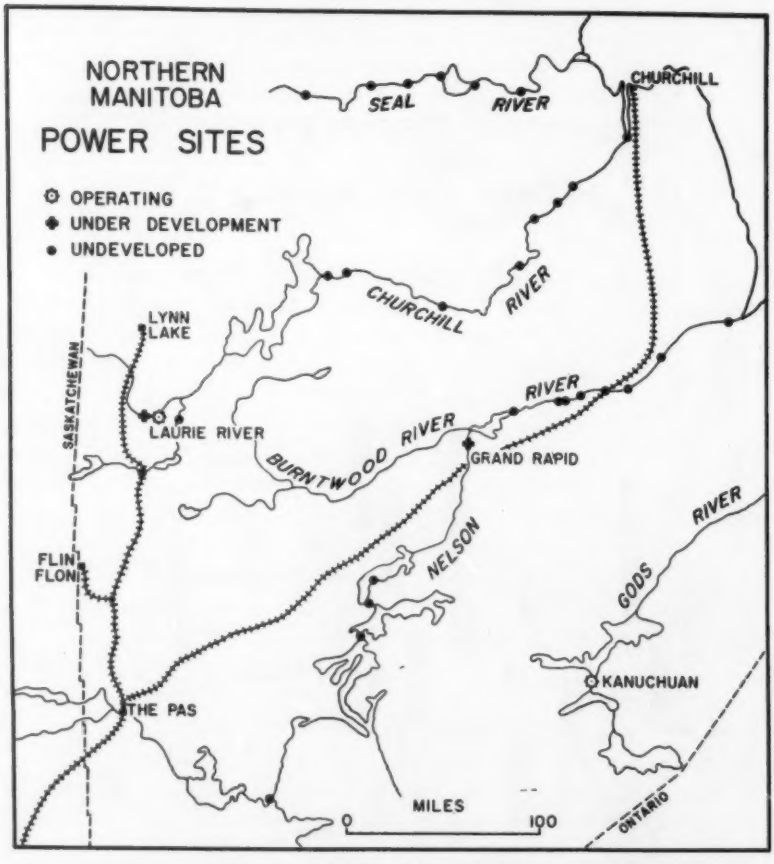

Fig. 4 Power sites in Northern Manitoba

present at reasonable costs (Fig. 4). There is the existing transportation of the Hudson Bay Railway for marketing the pulpwood to the south, and forest management and fire control towers have been established by the provincial government, as well as legislation aiding industrial properties.

Wekusko, mile 82, is the transportation center for the Snow Lake mining district (Fig. 2). An all-weather gravel road now extends 37 miles from the railroad to the growing mining community of Snow Lake. The exploitation of gold began in this region in 1945, and the local Government District of Snow Lake was

formed in 1947. The town has been developed under the provinces industrial town site legislation. By provision of the law, the company contributes certain amounts for capital expenditure in lieu of municipal taxes on the mining property. By 1957, company construction within Snow Lake included a new dormitory and dining hall, staff house, hospital, school, curling rink, community center, and more than 45 residences. Some 70 employees built private homes under a company initiated housing plan. There were also two general stores, a hardware, fuel and building supplies outlet, a bank, modern hotel, post office, transport company offices, and cafe in the town. In 1957 the population of Snow Lake was over 700.

Until 1956, the gold mining industry, employing over 300 workers, with an annual payroll of more than $1,200,000, was the only mining activity. As a result of exploration a major zinc deposit associated with silver, gold, and lead ores was discovered five miles southwest of Snow Lake at Chisel Lake and large copper ore bodies have been discovered at Osborne and Miller Lakes east of Snow Lake. In 1957, some 30 drilling rigs were exploring for minerals in the region. The base metals production of this area will become important in 1958. With the development of the known mineral reserves the population is expected to at least quadruple by 1960. Wekusko as the transportation node for supplying this region will benefit greatly from the mining developments.

Wabowden, mile 137, is the first major railroad divisional point beyond The Pas. Altho some pulpwood cutting and fishing are done, this is primarily a transportation center. The railroad yards employ the greatest number of workers. Wabowden lies at the crossing of the railroad and the winter roads to Nelson House to the north and Cross Lake to the southeast (Fig. 1). The freighting of goods to these two isolated outposts and the collecting of furs have long been important activities.

The Wabowden region has a number of potential resources. Within 25 miles to the southeast on the Nelson River a series of rapids and falls have a drop of more than 100 feet (Fig. 3). The Reclamation Service of the Dominion estimates that 700,000 horsepower can be developed from these falls and rapids during six months of summer, and 500,000 horsepower during the winter low-water period. The area north of Wabowden for a distance of about 50 miles has a number of clay basins with soil and climatic conditions

similar to the Clay Belt of northern Ontario between Cochrane and Hearst. An outpost of the Brandon Experimental Farm has raised wheat, oats and vegetables successfully. Several settlers also have small areas under cultivation. As demand for food increases this area may become an agricultural outpost for production of such perishable products as milk and vegetables.

Thicket Portage, mile 185, is one of the oldest settlements of the area having been a center for early exploration of central Canada. A number of Icelandic and Scandinavian settlers have migrated to Thicket Portage in recent years attracted by the commerical fishing possibilities. Its growing importance today, however, comes from its location to serve the new nickel mines in the Moak-Mystery Lake Region about 50 miles to the north (Fig. 2). The mining region is connected to the main railroad by a spur from Thicket Portage to the new mining town of Thompson.

In the mining developments which began in 1956, the International Nickel Company (Inco) has a projected $175,000,000 developmental budget. The project will constitute the largest nickel-producing area in the world next to Inco's operation in the Sudbury district of Ontario. Production in 1960 is estimated to be 130,000,000 pounds, approximately 40 per cent of Canadian output. The company began in 1957 to develop the new mining town of Thompson. Inco will supply schools and hospital facilities and other services for the town which is being planned to accommodate an initial expected population of some 8,000 persons, inclusive of the expected working force of approximately 2,000.

Included in the mining development is the construction of a large power plant at Grand Rapid at an estimated cost of $32,000,000 to $38,000,000 (Fig. 4). The power plant is located about 50 miles northeast of the mining operations and approximately 10 miles northwest of the Hudson Bay Railway. The capacity of the hydroelectric plant will be sufficient to supply Inco's power needs, with reserves for new industries.

Thicket Portage to Churchill. From Thicket Portage to Churchill only two small towns have developed in more than 300 miles of the railway route (Fig. 1). Ilford, mile 286, is the railhead for winter freighting operations to the God's Lake gold field about 115 miles to the southeast. Many thousands of tons of freight, mining machinery, explosives and supplies have been hauled by

tractor over winter trails to the mining field. This was the first mining area served from the railroad, but because of ore depletion, freight service has declined to insignificance in recent years.

Gillam, mile 326, is the second railway divisional point. The usual terminal facilities have been provided including a restaurant, hotel, and Hudson Bay Company store which caters to the fur business of the Indians. A canoe route leads to York Factory on the Hudson Bay.

In the future the most important resource of northern Manitoba may be its hydroelectric power (Fig. 4). Of the estimated 4,500,000 horsepower of hydroelectric potential in this area only one-quarter of one per cent is now developed. Many of the best dam sites are in the immediate area of the railroad. The railway crosses the Nelson River at Kettle Rapids where the river leaves the Canadian Shield and descends to the level of the coastal plain. The Dominion Reclamation Service estimates that in the series of seven rapids above and below the railroad there is a total drop of 200 feet, with a possible development of over 900,000 horsepower during the winter low-water period and 1,500,000 horsepower during the six months of summer. Other rivers in the area could also supply electric power for industrial development along the railway. The Churchill River is estimated to have a potential capacity of approximately 1,000,000 horsepower while approximately 150,000 horsepower is available on the Seal River and lesser quantities could be supplied from the Hayes, Burntwood and Grass Rivers. The availability of hydroelectric power could be the major factor in the future establishment of such industries as pulp and paper and aluminum.

North of Thicket Portage the country gradually takes on the atmosphere of the "North." From Avery, where the railway changes its course from northeast to north, to Churchill, a distance of 155 miles, the track is laid on perpetually frozen muskeg. The spagnum moss which covers the area provides such effective insulation that frost is encountered at a depth of 12 to 14 inches in August. The frost extends to a depth of more than 40 feet. Generally the muskeg is about six feet thick. Under it clay and boulders are found. The area is sparsely treed with stunted spruce and tamarack, and immediately south of Churchill there is one stretch of about 35 miles along the railway that is entirely barren of trees.

CHURCHILL

Churchill, the northern terminus of the railway, is one of the oldest ports of Canada (Fig. 1).[3] Its development began in 1689 when the Hudson Bay Company built a primitive trading post at the mouth of the Churchill River and initiated the importation of cargoes from Europe in trade for the furs of central Canada. On the boundary between Eskimo and Indian territory, Churchill not only occupies an excellent trading location, but has been the starting point for many geographical and scientific expeditions. Nevertheless, largely because of its sparsely populated hinterland, it remained an isolated trading post until the completion of the Hudson Bay Railway.

The modern development of the port began in May 1930 with the construction of a 2,500,000 bushel elevator, and in September the first grain shipments were made to Europe. From 1931 to World War II the export of grain grew slowly and Churchill remained a small port. There were many physical handicaps which delayed the growth of the export trade. The ice-free shipping season extends only from about July 25 to October 15. The general lack of weather data and ice information for the Hudson Strait north of Quebec made navigation extremely dangerous and many vessels were damaged during this period. Much doubt was expressed prior to 1940 as to the advisability of maintaining Churchill as a grain exporting port.

In 1942 the United States established an army post and airport at Churchill as a key defense station in northern Canada. From Churchill's strategic location military forces stationed here can control the eastern Arctic. During World War II weather stations and ice observation posts were established on the northern fringe of the continent. As a result the hazards of navigation were greatly reduced and no major damage has occurred to vessels in reaching Churchill since World War II.

The export of grain has risen greatly in the last decade. In 1948 35 ships callled at Churchill and the elevator delivered 5,326,000 bushels of grain. In 1956, 16,250,000 bushels of wheat were exported in 48 ocean ships and 4,400 tons of feed screenings were shipped in two lake vessels to eastern Canada. Because of the additional grain shipped the elevator was enlarged to 5,000,000 bushels storage capacity in 1954, and is now capable of cleaning and shipping 20,000,000 bushels of grain annually.

[3] The population of Churchill in 1956 was 3,039.

In addition to modern grain handling and storage facilities, Churchill's deepwater wharf is capable of berthing three ocean vessels for bulk grain handling at one time. Because Churchill is becoming a major import port for the Prairie Provinces, a modern freight warehouse covering 8,250 square feet was constructed in 1954. In August 1957 the warehouse was filled to near capacity with tractors, farm equipment, machinery and other articles imported from Western Europe for use in central Canada.

The port of Churchill with its short rail haul from the Prairies and its nearness to western Europe by an all water route is beginning to fulfill the aspirations of its early developers. From Churchill to Liverpool by sea is 2,930 miles as compared with 2,760 from Montreal. Churchill's future lies as the port for the development of the resources of northern Manitoba. Minerals and pulpwood may be exported to the world market thru Churchill. Industries seeking low-cost hydroelectric power may send their raw materials into northern Manitoba by way of the port and the Hudson Bay Railway. For example, bauxite could be brought to Churchill in empty grain vessels to be converted into aluminum in plants built along the railway.

Conclusions

Northern Manitoba is in the initial stage of its resource development. Because modern pioneer developments are massive in scale, transportation must be available to move quickly thousands of tons of freight. Initially this freight movement may occur thru an air lift. This type of transportation is extremely costly, and land transportation routes must be developed as rapidly as possible. Northern Manitoba has a decided advantage over much of subartic Canada in possessing an established rail route thru its North Country. From this route a vast virgin country is being developed.

WESTWARD MIGRATION OF COFFEE IN BRAZIL

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Coffee was introduced into northern Brazil from French Guiana. During the latter years of the 18th century it moved east and south where it was produced in small gardens on the Baixada Fluminence (around Rio de Janeiro), and on the Baixada Santos. It skipped the hot, rainy escarpment of the Serra do Mar, and appeared in

the Paraíba Valley in 1830's. For nearly another century, in search of new soils, coffee culture moved westward enveloping the regions around Campinas and Ribeirão Preto, and over the *espigões* (interfluves) of the westward-flowing rivers nearly to the Río Paraná. It disappeared from the Paraíba Valley. The next 30 years marked its spread to the southwest in the States of São Paulo and Northern Paraná. Since 1950, it has been penetrating the tropical forests on the western frontier beyond Maringá, and is being reintroduced under scientific methods in the east.

Reasons for Migration of Coffee Culture

Coffea arbica seemed less responsive to climate and elevation than to new soils. Preference has been shown for *terra roxa legítima* soils, derived from basic eruptives under thick tropical forests. In their upper 40 cm they have a pH of 6.2, and contain 2 per cent carbon, 18 per cent nitrogen, 12 per cent silica, 25 per cent alumina, and 33 per cent iron. Unfortunately, such choice soils occur only in patches and cover a little more than 7 per cent of the State of São Paulo.

The real "sea of coffee," on the central and western parts of the Sandstone-Basalt Planalto Occidental covers less fertile and more quickly impoverished soils derived from Cretaceous fluviolacustrine deposits, originally under *mata* (forests). In the upper 40 cm they have a pH of 6.5, and contain 1 per cent carbon, 0.10 per cent nitrogen, 5 per cent silica, 4 per cent alumina, and only 3 per cent of iron.

Coffee is a highly speculative crop requiring large amounts of capital and labor to turn out quantity production. The Paulista's reputation for rootlessness, and readiness to speculate in land, urban real estate, or urban industries has long been known. In response to increased world demand and quick profits, he has been known to cut and burn the forest, then to plant extensive coffee holdings. But with a retrogression, he may destroy the coffee trees in favor of the cash crop of the day, switch over entirely to cattle grazing, or even sell his lands and move west.

Effects of Coffee Migration on the Landscape

The effects on the landscape of this historical westward coffee migration, and of the current high world demand for coffee are readily disernable to the observer. Extensive areas once forested,

that supported coffee until declining yields became apparent, are now covered with *campo cerrado* (savanna with xerophytic shrub). Some coffee lands have been completely abandoned to pasture grasses, while others are devoted to such cash crops as sugarcane, cotton, citrus, grapes, vegetables, and/or large eucalyptus stands (for firewood).

The reintroduction of new plantings in the east under scientific methods—fertilization, planting on the contour, introduction of quick-maturing varieties, such as the Novo Mundo, is taking hold on a small scale.

Cities and towns reverberate from the feverish efforts to meet the increased world demand for coffee. Fabulous Rio de Janeiro, overcrowded Santos, and ultramodern São Paulo—all over 400 years old—continue to derive their "growth calories" from coffee sales. New construction and industries indicate economic expansion in the interior towns of Campinas, 200 years old; Ribeirão Preto, 100 years old; Marília, founded in 1924; Londrina, first land sold in 1935; all the way to the frontier at Maringá, founded 1947—the newest regional capital—a town planned for 100,000 people! A meter gauge railroad, with wood burning locomtives, reached this frontier city in 1954.

This new economic frontier is the magnet that today is attracting to the State of São Paulo the greatest waves of migration in Brazil. People are coming from every part of Brazil, and from many foreign countries as well. In addition to the Paulistas, the Portuguese, Italian, Dutch, German, Japanese are represented, with mixtures already beginning to appear.

In my opinion this frontier differs from all others in Brazilian history, for here it is possible to climb the agricultural ladder. This is the realm of the *sitiante* (small farmer). The *fazendeiro* (large estate owner) is discouraged from taking up lands, and indeed, is unable to do so except in the most peripheral locations.

Considerable urban-rural planning preceded the frontiersmen. The typical *sítio* (small farm) is 5 to 10 *alqueires* (one *alqueire paulista* equals 2.42 hectares, or 5.98 acres). Property lines for each rectangular-shaped *sítio* run up and down slope so that the *sitiante* has three kinds of land at his disposal: the top and sides of the slopes where the soils are more fertile for coffee; the middle slope for his home, garden, or other cash crops; and lower slope next to the river for pasture.

After a sizeable down-payment the *sitiante* then begins to clear his chunk of the forest. His first cash income is from the sale of the larger logs to the local sawmill. The culls are left to dry for three or four months, then are ignited. Large logs and stumps that defy burning lie scattered about like matchsticks in among the coffee plantings. He intertills the rows of coffee trees with subsistence crops: corn, rice, wheat, manioc, or bananas. Within four or five years the coffee bushes (a group of three to five trees) have attained a height of eight or more feet, and are producing their first crop of cherries—the *ouro verde* (green gold) he has anticipated. Now, he is on the road up! But other things are not always equal. Two of the greatest hazards to production are frosts and winter rains. The severe freeze in July of 1953 "burned" thousands of hectares of coffee, completely killing many of the youngest bushes. The 1955 frost did further damage to new green shoots. Hence, the *sitiante* must now wait another three years for a cash return from his coffee. In the interim he resorts to subsistence crops once again.

Even tho the northern part of the State of Paraná has large areas of *terra roxa legítima* soils, it is a zone of climatic transition. There is a departure from the typical Cwa (Köeppen) climate of the Western Plateau, for winter rains occur from time to time. July of 1956 were the first prolonged winter rains in ten years.

Future of Coffee Culture in Brazil

Coffee is now penetrating the last frontier! It is strikingly apparent that if it is to remain the main cash crop of the country for many years to come—and Brazilians hope it will—it must be subject to further experimentation, and to scientific methods of production. Varieties must be developed that can be industrialized, that will mature quickly and produce higher yields, and that can withstand the insults of nature.

INDEX to the *Journal of Geography*

Type is now being set on the INDEX to the *Journal of Geography* (1922-1956). This INDEX will make a book of approximately 270 pages. It is proposed that the hard back copies of this publication sell for $5.00 each and that paper back copies be sold to non-members for $4.00 each. Members of the organization can purchase the INDEX for $3.00 per copy, or at only a little above the cost of publication. It would be appreciated if you will notify the Secretary should you not consider the above rates satisfactory.

A PROGRAM OF FIELD GEOGRAPHY IN HIGHER EDUCATION*

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The basic substance of field geography in the curriculum has generally been thought of as applicable for professional geographers' training, or as a subsidiary teaching device in general geography courses. Either one or the other of these two interests has accounted for most of the efforts of the geographer in academic field work. In addition, there has developed in a large number of institutions, so-called travel courses oriented toward geography. Neither one of these basic classifications fits the function and description implied by the title of this paper, and the deviations therefrom are the substance of this particular article.

The curriculum of field geography, as implied here, has evolved around a program in which the author has been involved for the past six years. One hundred and sixty students have participated in the program and have traveled approximately 44,000 miles.

The United States has been systematically divided into four basic quadrants as illustrated in Fig. 1. Each quadrant has been the scene of one or more field trips of from 9 to 26 days in length, depending upon the size of the area. Students received credit for these field courses in proportion to the time spent in the field for the particular area. The 26-day trip resulted in credit of from four to six semester hours. The nine-day trip constituted a three semester hour credit course. The proposed trip, of 56 days, for next year has a tentative credit of six semester hours assigned to it. The theme of each course was a geographic traverse of a variety of geographic regions.

Prerequisites and Requirements

The first four years of the program were offered primarily in an undergraduate program, and the subsequent two years were offered in a graduate program. In the case of most of the undergraduates they possessed at least nine hours of work in the field of geography or a related science that was characterized by some field work. The

* Acknowledgment is here made of the aid and cooperation given to the program by Eastern Michigan College, Flint Junior College, and The Mott Foundation of Flint.

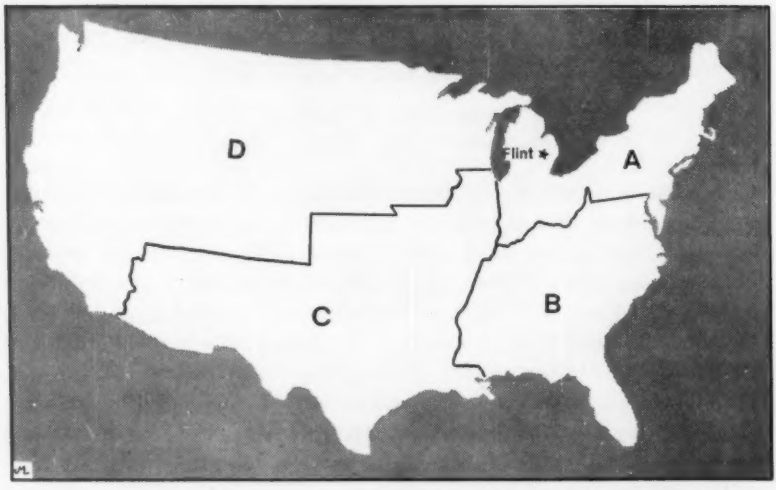

FIG. 1 Quadrants of the United States A. 1952 and 1956. Eighty students. B. 1952 and 1955. Forty-five students. C. 1955. Ten students. D. 1954 and 1957. Forty-five students.

graduate students, usually teachers, did not always have a prerequisite of nine hours of academic geography, but they did have some maturity of ideas and education. These students submitted applications, letters of reference, and when possible, appeared for a personal interview. An undergraduate participating with the graduate group must have at least 85 hours of undergraduate work. This generally meant that the undergraduate was very close to senior classification. Auditors were limited to less than 10 per cent of the enrollment in each class. The student, in preparing for this course, fulfilled in addition to the prerequisite, the required pre-field and post-field conferences of one to two days in each period. In the graduate program, in particular, this was two full days. They also prepared a written summary of the field work which was usually documented by maps and illustrative material. In addition, they completed transect charts dealing with the landscape they visited. A basic textbook and a guide book provided supplementary reading for the participants. Also, each student participated in the preparation and writing of two types of pressure problems. The first type of pressure problem was based upon the withdrawal of basic statements from traditional books on the re-

gions visited. The students were asked to substantiate or refute, in a scholarly manner, these statements based upon their observation. As an example, in *North America,* by J. Russel Smith, and M. Ogden Phillips, there appears this statement: "New England was a hard land." This was one type of statement used for evaluation. A second group of statements evolved around the use of observations to describe a region or to explain the condition of a region. For example, "What climatic controls can you perceive as most evident in the landscape of the Sacramento Valley?" The student's grade was based upon an evaluation of the quality of those reports in addition to the summary report mentioned earlier and other observations the instructor might make.

Type of Transportation

The basic transportation unit used in this field geography program is an automobile. Each year arrangements are made with a commercial car agency for the lease of these automobiles. A contract is prepared, giving the agency a guarantee of the use of a specific number of cars each to be driven a guaranteed minimum of miles. The cars are usually of high quality, relatively free of mechanical defects, and have been driven enough to be free of new car problems. They are one of three basic low-cost cars, and in the past four years they have been the middle grade of this type of car. Two cars are driven by the instructor and a student assistant. The other cars are driven on a cooperative basis by the members of the class. Leased cars are preferred to those belonging to members of the group. The cars are leased with the cost of gasoline and motor oil being provided by the field group. If more than one trip is carried on during the summer, a new group of cars is available for each trip. This makes a very satisfactory source of equipment for road travel. Cars are flexible for coverage of areas on and off the main arteries of traffic, and over all, are cheaper than buses. Since each student is covered by an insurance policy of $10,000 life and $1,000 medical, the coverage is fundamentally equivalent to what is generally found in commercial buses.

When necessary, airplanes are hired to facilitate the analysis and the interpretation of a region. On occasion, a DC3 has been leased for an hour or two for a survey of the landscape, and once in a while, for those who are interested, a Piper Cub or similar single engine aircraft is used for short runs.

GUIDE BOOK

Each student is provided with a guide book for the trip. This consists of an outline of the area to be visited, presented in the form of a running list of towns and the features represented by the town and in the neighborhood of the town. An example of this section of the guide book is presented here.

Town	Pop.	Mileage Next Town	Accumulated Mileage	Special Features
Custer City	500	1	773	Oil boom town
Degolia	27	5	778	Tunnungwant River
Aiken	100	2	780	
Gifford	200	2	782	
Cyclone	700	3	785	
Ormsby	160	5	790	
Smethport	1,797	1	791	Early town built by Dutch Bankers. Oil Boom 1860-65
East Smethport	280	9	800	Glacial Boundary
Port Allegheny	2,519	5	805	1484' Elev. Silk mill. Toy factory. Center lumber industry, 1830-40
Burtville	50	3	808	
Roulette	850	5	813	Once famous lumber town
Mina		5	818	

This example represents an area near Custer City, Pennsylvania. The guide book is useful because it gives individuals a chance to know where they are; how far they must travel before a change in regions is experienced; and what they can expect to see if they observe carefully. Occasionally parts of the guide books are left free of material so that the student can fill in with supplementary information. If the student uses the guide book effectively, it serves as a constant source of guidance to the areas represented. Also, it is of value to the individual in planning a route for overnight stops and miscellaneous stops thru the day. It is absolutely essential in pre-determining the cost of the field trip for the participants.

STUDENT PARTICIPATION

Each student is provided with mimeographed forms to be used in evaluating features that they see. One form, similar to many outlines suggested in a number of texts, is for analysis of a region. Another form is for the analysis of an industry, and is general enough to encompass the various types of industries to be seen.

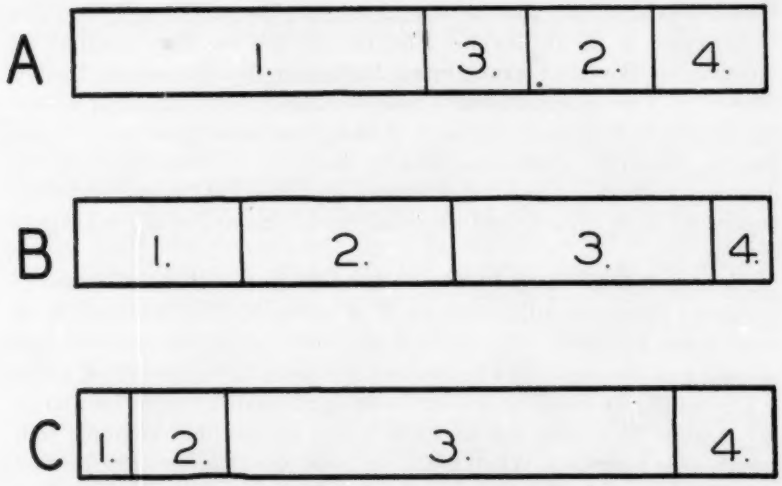

Fig. 2 Land use for sample regions A. Scotsburg Lowland: 1) Cropland. 50.6%; 2). Pastures. 20.1%; 3) Forests. 19.7%; 4) Miscellaneous. 9.6%.

B. Cumberland Plateau: 1) Cropland. 24.8%; 2) Pastures. 30.1%; 3) Forests. 37.7%; 4) Miscellaneous. 7.4%.

C. Gulf Coastal Plain: 1) Cropland. 8%; 2) Pastures. 30.1%; 3) Forests. 65%; 4) Miscellaneous. 14%.

Still another basic type of observation is land-use measurement. This is founded upon the observation of at least five square miles in each geographic region visited. Students clock the speedometer and the land-use for five non-consecutive miles, and a general average of this land-use is made, and usually represented in color but that is not particularly necessary. A sample of this recorded observation is illustrated by Fig. 2. After a number of these land-use graphs are prepared, students find that they have become quite skilled in mapping and that they are making observations of a region much more successfully than before.

In the selection of industries to be visited, it is found that after analyzing preliminary information and the availability of time, certain types of industry appear in any particular region. Examples of basic industries visited in a number of places are as follows: 1. A phosphate mine of the International Minerals and Chemical Company at Bartow, Florida; 2. The Imperial Wallpaper and Paint Company of Glens Falls, New York; 3. The Carlton McLendon Furniture Company of Montgomery, Alabama; 4. Weyerhauser

Lumber Mills of the Pacific Northwest; 5. Charles Krug Winery in California; 6. A Hydraulic Electric station on any number of streams in Southeastern United States or Northwestern United States; 7. The International Trade Building, New Orleans; 8. Macon Kraft at Macon, Georgia; 9. A tung tree plantation near Tallahassee, Florida. These are merely samples of more than 60 industries visited in the United States on these field trips, and they represent both typical and atypical developments in a geographic region.

A region traverse field trip such as this, provides less time for lecturing than one might desire. It is assumed that students have done some pre-field trip reading and have acquired some understanding of the area. To supplement this general information, there is frequently an evening dinner meeting at various stops on a trip, for a general discussion of geography, geographic regions, and geographic concepts. When possible, local geographers are invited to participate in talking with the group and to discuss the area with which they are best acquainted.

Summary

The student participating in a program of this type, where there is a unified goal, receives many of the benefits commonly thought of as a value of participation in field work and travel. In addition, these field trips are a source of great value to a teacher trying to improve the teaching of geography in the public school program. There is, for most of the students, the first impact between geography as a college subject, geography as an elementary school subject, and geography in applied field work. This is the first time that many of them have had a chance to contrast the practical aspect of geography with the philosophy of the geographer in a non-academic environment. It undoubtedly influences their way of thinking and their attitude towards geography; their concept of magnitude and space is greatly altered. For the first time, they realize how much must go into making the generalization of a textbook as compared with the scope of the field represented.

It would be difficult, and unnecessary in this paper, to list all of the benefits traditionally mentioned as a goal for field work. The field trip, using the type of transportation and the breadth of materials offered, opens the mind of the student to the broader aspects of geography.

LONGVIEW, WASHINGTON—A PLANNED CITY

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Longview, Washington, one of the newest cities of the nation, represents a daring experiment in urban planning and twentieth century pioneering. Its story is unique in the annals of American cities. Thirty-four years ago the townsite was a flat marshy plain facing the Columbia River. Muddy sloughs outlined by rows of willows meandered across the terrain. Small herds of dairy cows and a few scattered farmsteads added a rural atmosphere. Today the site is occupied by a city of 23,200 people.

Longview was not the result of chance, nor did it spread from a crossroads node to cover the land with urban trappings. Rapid development typified its early years but there was no haphazard and mushroom growth. Longview was planned in its entirety ere the nucleus of a city had form. The entire urban framework was blueprinted before the first cornerstone was laid or the foundation poured for a home. Even before Longview had an official population, legal name or city standing, private enterprise lavished nine million dollars on the urban skelton.

GENESIS AND SITE

The genesis of Longview was interwoven with the destiny of the Long Bell Lumber Company. In 1918 the company's southern timber was nearly exhausted and the directors were faced with two alternatives—to liquidate their holdings or to make a fresh start in some other section of the country. The decision was to begin anew in the Pacific Northwest where enormous stands of merchantable virgin timber still remained. This decision headed the series of steps preceding the building of Longview (Fig. 1).

The new enterprise was inaugurated by the purchase of about 70,000 acres of predominantly Douglas fir timber in Cowlitz and Lewis counties of southwest Washington. For the western holdings the company intended to build a saw mill that would surpass the output of their combined southern plants. Manufacturing, therefore, would be concentrated at one place—a factor favoring a new city.

The carefully chosen industrial site for this gigantic lumbering

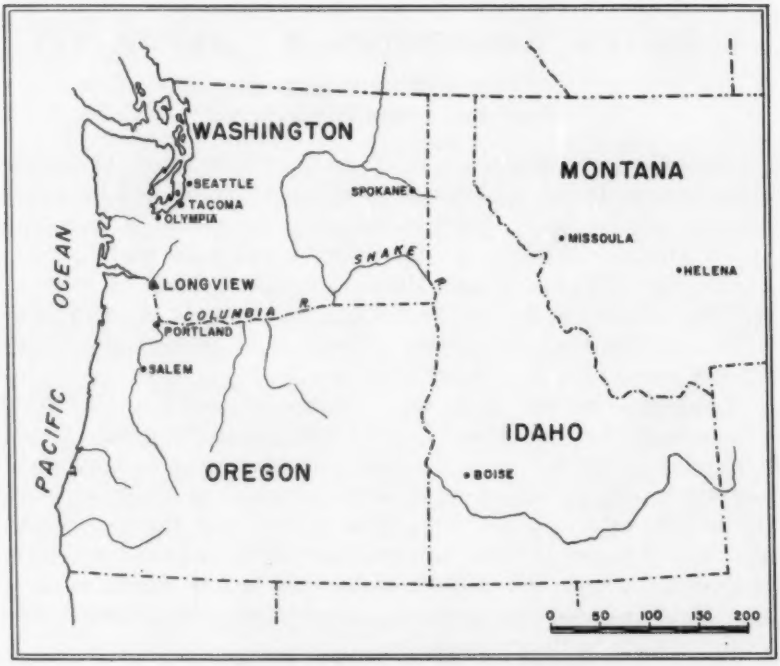

FIG. 1. Longview, Washington in the Pacific Northwest

enterprise was the land west of the confluence of the Cowlitz and Columbia rivers. The site advantages were: 1. the Columbia River could be utilized for log movement and lumber export, 2. the level terrain would be easy to develop and there was sufficient room for expansion, 3. the timber holdings were contiguous and there would be a downhill rail grade from forest to mill, and 4. several major railroads were conveniently located.

LONG-RANGED PLANNING

After raw materials and site were secured plans were considered for constructing a company town to satisfy the requirements of Long Bell employees. The labor force required for the new operation was estimated to be between three and four thousand men. It was further estimated that for each industrial worker there would be three and one-half non-industrial workers in the

community. This indicated that the Long Bell mill when running at full capacity would support approximately fourteen thousand people. Thus simple arithmetic was a basis for the founding of Longview.

Robert A. Long, president of the company's board of directors, had often deplored the rough and ephemeral communities typical of past milling and logging operations. His hope was that someday there would be a permanent, attractive city associated with the lumbering industry. On the strength of the estimated population for the western venture the idea of an attractive model city instead of a bleak company town became an integral part of Long's future plans. More land was purchased near the industrial site until Long Bell controlled approximately 14,000 acres. A famed urban planner, J. C. Nichols, was consulted and in the spring of 1922 a research team began work on the western site. By fall tentative plans of a model town were presented to the board of directors (Fig. 2).

The essence of the plan was to prevent the aimless spread of the proposed city across the landscape thru the establishment of a precise street pattern and the control of private property location. The street system, similar to the one employed at Washington, D.C., was to be a radial pattern superimposed over a grid. The intersection of the broad thorofares would establish a permanent civic center. Furthermore the diagonal boulevards would aid in funneling traffic toward the business core. A conglomeration of unrelated districts was to be avoided by zoning to separate industry, business and residences. The business core was to be confined to an area east of the civic center. Industry was restricted to river frontage on both the Columbia and Cowlitz rivers. Light manufacturing and service activities were allotted a section south of the business center. Residential locations were to semi-circle the business core. To achieve a degree of architectural harmony, residential districts were to be sub-divided according to the cost of construction. Suburban land was divided into small acreages for workers interested in minor agricultural activities. Strategic locations were outlined for parks, schools, hospitals and other needs for the public welfare. Many minor controls were proposed to cover such things as street widths, utility locations, building heights and landscaping.

The idea of building a model city, as well as the proposed urban

FIG. 2. The business district is near the center of the picture. Vacant lots are still in evidence. Industries may be seen paralleling the Columbia River in the background. The street pattern of the earlier-developed residential section is outlined by the rows of shade trees. Courtesy Longview Chamber of Commerce. Photo by Jan Fardell.

plan, was accepted by the board of directors and the Long Bell Lumber Company became involved in one of the largest real estate ventures in the west.

DEVELOPMENT

Work on the site began immediately. Swamps and sloughs were drained and adequate dikes constructed along the two rivers to furnish flood protection. Streets and sidewalks were graded and paved, utilities installed, streets and parks landscaped and one of the large sloughs was incorporated into an artificial lake and park area. Clearing, diking, grading, excavating and landscaping were in operation almost simultaneously and to the observer the scene was one of chaos. But like pieces of a puzzle the various projects were consolidated into a tangible city frame-work. Longview was dedicated in July, 1923 and the city that was an idea nine months previously was now becoming a reality.

The goal for the size of the city when a company town was considered had been approximately 14,000. However, the planners envisioned a city of some 50,000 and the framework was built to accommodate that number. The larger plan was partly stimulated by the spirit of the times—the era of the early 1920s was one of prosperity and speculation. A ready-made city and an ideal site would attract many industries. Furthermore the planners wanted room so that the city might grow properly as a unit.

The large framework and the zoning restrictions created a unique growth pattern. Cities usually spread outward from an original central core but Longview had three growth characteristics: 1. the normal expansion from the central core outward, 2. growth from the outer residential ring toward the center, and 3. clusters of residences springing up in their respective price districts.

In 1924 Longview was incorporated as a third class city with an estimated population of 5,800. Up to this time the Long Bell Lumber Company had operated and financed all of the municipal activities. Jurisdiction was now relinquished; the company, however, still controlled the disposal of the real estate. Development was spurred in 1927 when the Longview Fibre Company constructed a large pulp and paper mill. A second significant industrial addition was in the same year when Longview was chosen as the site for a huge milling operation of the Weyerhaeuser Timber Company. The city continued to move forward until expansion was halted by the nation-wide depression of the 1930s. After nearly a

decade of virtual economic stagnation growth was again engendered by the impetus of World War II. Expansion and prosperity are characteristic of Longview today.

Landscape and Land Use

It is difficult for a city to hide its years as many clues to its age appear on the cultural landscape. Narrow streets, antiquated homes, shopping centers with betraying dates engraved on business blocks—these and many others are keys to old age. Longview, however, is a young city. The freshness of the residential and business district and the modern architecture of the public buildings gives proof of its youth. There is no ancient courthouse, no statues or plaques to commemorate World War I. No livery stables or blacksmith shops converted into garages tie it to the horse and buggy days.

That Longview was planned in advance is apparent in the broad avenues radiating from the civic center, utility poles confined to alleys and the even ages of parking strip shade trees. Study of a land use map or a detailed observation of the city is necessary, however, to reveal the gross pattern of its plan. This indicates that industry, business and residences are anchored to specific locations.

Nothing within the business or residential district stamps Longview as a lumbering town. It appears more like a fresh suburban area tributary to a large metropolis. The civic center with its landscaped grounds imparts an air of stability and character. The Monticello Hotel, the city's largest and tallest building, faces the civic center on the west; the Post Office, city hall and library are the principal buildings surrounding it on the other sides. Stretching eastward from the green parkway is Broadway, the "show street." Elm trees line its entire length and hedges skirt a central inlay of lawn. A row of Lombardy poplars serves as a wooded boundary separating the civic center from the business district. The main business street, is Commerce Avenue. Retail stores, restaurants, offices and the various businesses characterizing the main street of any American city are concentrated here. Since the maximum height of the buildings is three stories, they present an even skyline. The "canyon" formed by the masonry structures gives a clear cut vista of the trade arterial because no unsightly "forest" of utility poles obstructs the view. The shops as well as the quality

of the merchandise and the store furnishings would do credit to the shopping district of a much larger city.

In a triangular section south of the business core is the area zoned for small businesses and manufacturing establishments which include a paper box plant, fuel yards, small mills, oil storage tanks, warehouses, machine shops, cabinet shops and a scattering of specialized retail stores.

The principal residential areas partly surround the main business center and are notable for their attractiveness. A distinctive feature is the harmonious appearance of the homes particularly in respect to values. Furthermore the districts are almost exclusively residential with little intrusion by other forms of occupancy. Deciduous trees line most of the parking strips with only one type of species planted to each street. The trees add beauty and manifest maturity belied by the newness of the homes.

Many of the best homes are in the West Side Addition, a district spreading fanwise from the civic center to the curving parkway of Lake Sacajawea. Altho there is a preponderance of roomy two-story dwellings, many of the more recently erected homes are of the low, sprawling type with considerable brick construction. Beyond Lake Sacajawea and extending toward the Columbia River are the more modest homes especially the older dwellings near the industrial plants. The highest percentage of low quality housing is located in the southeast portion of the city. Wooded and view sites have attracted builders to a hilly area on the north where homes are almost estate-like.

The chief economic activity of Longview is the processing of Douglas fir, hemlock and other forest species into lumber, pulp and paper. Industry employed 9,420 men in 1956—8,648 were on the payroll of wood products plants. Only one large plant represents a major diversification of the city's economic base. This is an alumina reduction plant of the Reynolds Aluminum Company which was attracted to the area in 1941 by low cost Bonneyville power. The port of Longview adds a commercial flavor and is currently second in Pacific Northwest grain exports.

The industrial area, outside of the city limits, follows the shores of the Cowlitz and Columbia rivers according to the original plan. At present only a few industries are located on the smaller and less desirable Cowlitz frontage. The majority have sought the excellent transportation advantages of the Columbia. The Columbia frontage

and the industrial payroll (about 83 per cent) are dominated by three large companies—Long Bell, Division of the International Paper Company, Weyerhaeuser Timber Company and the Longview Fibre Company. The Long Bell, Division of the International Paper Company confines most of its activities to the production of lumber, hardboard, furniture, the creasoting of timbers and plywood. The Weyerhaeuser Timber operation at Longview, the largest integrated wood products plant in the world, manufactures lumber, sulphite and sulphate pulp, food board, plywood and bark products. In addition, its research laboratories are quartered here. The combined rated capacities of these two companies are over 700 million board feet annually. The Longview Fibre, third member of the economic triumvirate, is engaged mainly in the production of pulp, paper and container board. In all cases diversity key notes the activities of these plants.

The waterfront mills have their wharves parallel to the plants instead of jutting into the river. Lumber is neatly stacked on the docks while packages of pulp are stored in long freight sheds. Steel cranes and dock equipment are ready to fill the holds of incoming ocean vessels. Logs strew man-made ponds or river storage basins. Conveyors reach into the water and a slow but steady procession of logs moves into the mills. Gray smokestacks and burners tower into the sky. Long gray wooden buildings cover the milling operations. Tank cars of acid and gondolas filled with yellow sulphur stand on sidetracks. Neat white company offices surrounded by green lawns are near the gates of the steel fences enclosing the plants.

The rich timber resource of the Douglas fir region furnished the stimulus for the building of Longview. Today it continues to be the major base of the economy. This renewable resource, thru tree farms, policies of sustained yield cutting, and intensive research in both mills and woods, will continue to play the most significant role in Longview's future.

Summary

Longview has the distinction of having been planned in its entirety. Only a blueprint in 1922, it now compares in size and appearance more than favorably with other older cities in the Pacific Northwest. Altho Long Bell Lumber Company backed its birth and fostered its early start Longview shows no evidence of paternalism. This bold real estate scheme and its associated urban plan have been successful. The municipal administrators with only minor

exceptions have adhered to the basic plan developed more than three decades ago. All phases of the city have moved forward in combination to clothe it with urbanity and give it economic life. However, the effects of the over-ambitious plan are apparent. Open spaces still exist between the various districts. The river frontage has room for more plants, the business core has not completely joined its residential neighbor, where vacant lots still await homes. The over-zealous planners and builders had not foreseen the economic depression of the 1930s. The estimated number of laborers who were to be housed within the city did not materialize. The mobility of labor thru excellent highways and the wide-spread use of the automobile was not anticipated. The large mills attracted laborers from nearby Kelso who commuted the short distance and lived in their own city rather than in Longview. Many workers preferred to maintain homes on small part-time farms in the adjacent country side. Today Longview's industries draw labor from all of Cowlitz County as well as other tributary areas. This is exemplified by the heavy early morning and late afternoon traffic moving in and out of the city. However, the gaps are not a major flaw since they allow room for the city to grow along the lines indicated by the planners. Furthermore the open spaces are filling—the value of new building construction has averaged over three and a quarter million dollars annually for the past four years. Longview attests to the value of urban planning. It is a going growing concern well on the road to fulfilling its place as a permanent model city of the Pacific Northwest.

THE WILDERNESS ROAD

IRVIN D. MAGIN

A leisurely present-day journey thru the fertile, rolling valley country of southwestern Virginia and further onward into the grassy hills of eastern Kentucky is a pleasureable one indeed; somewhat distracting perhaps, but only because of the beauty of nature's outdoor splendor. With a panorama of picturesque landscape here to capture the attention of the present, it is not unlikely that the past will be left behind, and with it thoughts of one of America's early wonders. That "wonder" may well be a portion of "Boone's Road," a portion over which you may be travel-

ing. To you this fact may be well evident, but will be of even greater interest when you realize more fully the country thru which you have traveled; rugged, forbidding and seemingly impossible terrain thru which to build a road; especially so in 1775. Upon turning back the clock of time in your mind to the days of the early frontier you may wonder at the succession of events which transpired to bring about the formation of this interior route, and the birth of this land. Geography dictated the means and history directed the acts by which its story was formed; a story of the fulfillment and enrichment of a valuable facet of early Americana.

The Wilderness Road had greater influence in the story and romance of early America than any other trans-Appalachian route. This was the trail that gradually expanded itself from a mere woodland track into a migrant's path, a pack horse route and finally into a wagon road. It played a significant role in the settlement regimen of the new west by providing the means for population movement down the Great Valley of Appalachia, thru the Cumberland Gap and inland to the headwaters of the Holston and Watauga Rivers, and Kentucky and Tennessee.

Early Dreams and Action

The earliest thoughts concerning such a road through the interior were brought to light in 1775 by Richard Henderson, a land speculator from North Carolina, and the governor of Transylvania as the Holston-Watauga land was known at that time. It was he who foresaw a great future in the separateness of this region and who was instrumental in its acquisition. In March, 1775 at Sycamore Shoals on the Watauga he met with the Cherokee chiefs to discuss a purchase of their lands. From the success of the agreement America gained a sizable portion of real estate. By its stipulations Henderson acquired for the purpose of settlement a tract of land lying between the Ohio, Kentucky and Cumberland Rivers representing an area one-half the size of the present state of Kentucky. Over 20 million acres of choice, rich, productive lands fell into the hands of the westerners.

Seeing that some form of socio-economic contact was necessary to join Transylvania with the areas to the east Henderson conceived of a road, a wilderness road, to serve as the vital link between the Holston country and the Kentucky River. A project of

such value and importance called for a man of equal worth to head the project—Henderson chose Daniel Boone.

The "Wilderness Road" Route

At this time in the history of settlement scattered pack horse routes were the only visible forms of transportation, wending their way toward the upper reaches of the Holston and Watauga Rivers from the waters of the Shenandoah and the James. It was from this river convergence point in Virginia that Boone was to begin his path down-valley, thru the Cumberland Gap and across Kentucky to the Falls of the Ohio, the present-day site of Louisville. Until that time in the early development of the interior no practicable arterial route was existent from the Atlantic to the Ohio Valley and between the Cumberland Gap and Pittsburgh. Boone's trail-blazing efforts were destined to alter this situation to a marked degree.

The road-carving party left Holston on March 10, 1775 and in less than one month's proceedings they would arrive in the fertile blue grass region. The first and foremost objective was to reach the Cumberland Gap itself, their jumping-off point for the interior. From the upper reaches of the Holston the new road veered to the west. Moving across small gaps, fording streams and cutting thru the ever-present thickness of woodland, the road crossed the rivers and streams of the Clinch, Powell and Walden Mountains which lay parallel to the Powell River. The Powell River Valley then provided the avenue of approach to the Gap itself; an old "wind-gap," 1,600 feet above sea level which would afford these road builders easy access thru the Cumberland Mountains and into the west.

After crossing over the "hump," the party followed northward along the "Warrior's Path," a 50-mile-long trail which ran between the mouth of the Scioto River in Ohio, home of the Shawnee, and the Cherokee country of eastern Tennessee. This Indian trail served as a reliable guide for the trail-blazers who followed its direction to the Cumberland River where it broke thru Pine Mountain. After fording the Cumberland it was followed downstream to Flat Lick and from that point buffalo trace provided a signal to follow northwestward along the ridges to the Rockcastle River. From the Rockcastle the Road and its builders continued north thru Boone's Gap in the Big Hill Range (the present route of the Louisville and Nashville Railroad), until on April 6 the 30-

man group reached the fertile, undulating plains and blue grasses of Kentucky at the confluence of Otter Creek and the Kentucky River.

As traced out at first this trail was but a mere path thru the woods and it allowed no vehicle of any sort to pass over it until some years later when conversion to a wagon road was completed.

Construction of the Road

The route was located well for potential traffic, however and seeing the future necessity for a well-oriented wagon road, the Virginia legislature in 1779 directed a group to complete an investigation and exploration of the area traversed by its route. Also on the agenda was a resolution suggesting a tracing out of the most practicable route, if different from the original one, an order to proceed with a land survey and clearance operation of a nature that would provide a route of easiest travel for people and pack horses, and a directive to report on the practicability of such a wagon road as well.

No real progress was seen for 12 years however, until 1791, when funds were finally allocated for clearing and improving the road; work which extended over 22 days during that summer. Other legislative enactments in 1794 and 1795 furnished still further funds for the continuation of the project which when finally completed provided a 30-foot-wide path allowing an easy passage for carriages, wagons and people alike. But despite all improvements thruout the years the road remained much as Boone had left it, and until 1812 its physical status changed little.

Trips West

The details of westward travel during this time are of more interest when we can witness the itinerary of one particular trip; a journey made by one William Brown in 1782 from Hanover, Maryland to Harrodsburg, Kentucky; a 555 mile trek. Brown and his party left Hanover on May 27 and during the first week of July arrived at the North Fork of the Holston River and the protection of its block-house located there. The road, generally good at least in its eastern reaches, afforded moderately easy travel across both the Blue Ridge and Allegheny Ranges and the group made good headway. On July 18, after a 2-week delay for provisioning, the party continued their travel toward the wilderness. From the block-

house until across Wallen's Ridge the road's conditions were generally poor, especially the section which ran between Stock Creek and Stock Creek Ridge.

Fording of both the Clinch and Holston Rivers was always a problem the year around; both streams easily conquered in dry weather, but during this, the rainy season, their raging turbulence proved rafting a necessity. After crossing these streams passage down the Powell Valley to Cumberland Gap was relatively easy altho at places harassed by sporadic raids from still hostile Indian bands. From the Gap until across the Rockcastle River good road was meager and travel was a rugged maneuver. The fording of both the Cumberland and Rockcastle Rivers, like the Clinch and Holston, was relatively easy too except during this peak period of the run-off season. And after they were crossed the few remaining high hills offered little resistance and Brown's party reached Harrodsburg on July 29, 63 days after their departure date.

This is merely an example of an easier accomplished trail march, for there were numerous other parties of this same period who found more difficulty in their movement. Between the Potomac and New Rivers along the Great Valley of Virginia travel was relatively unhampered by difficulty and danger. The rougher and more perilous part of the trip began when the travelers crossed the New and turned directly toward the west to traverse the mountains and valleys leading into the new frontier country. Here many groups felt the varying seasonal climatic effects more than others, and more so in winter than any other time of the year. Still other parties faced added Indian menaces from time to time. These then were the people who combated the greatest hardships in their inland travels.

Branch Routes Develop

There were other trails too which led off in different directions from the Cumberland Gap-Wilderness Road passage to provide even more routes for settlement moves. The primary branch of "Boone's Road" trended northwest from the Rockcastle River and then, via a gateway at Crab Orchard, found rich plains land near Stanford where the settlement of Station St. Asaphs was established. This subsidiary route actually held stronger popularity than Boone's since it provided a more direct route into Kentucky's level lands. By passing thru Danville, Bardstown and Bullit's Lick it found its terminus at the Falls of the Ohio, and was the

more feasible link with the old French fur posts on the Wabash and Mississippi Rivers.

Another important westward lateral followed the normal route of the Wilderness Road to Cumberland Gap, then southwestward to the bend of the Cumberland River where Nashville now stands. Later, in 1783, another new road was formed at the confluence of the Holston and Clinch Rivers to pass over Cumberland Mountain, into the Cumberland Valley and, again, to Nashville. This latter route was also joined by two other trails; one from North, the other from South Carolina, both converging at the mouth of the French Broad River.

The new west had by this time been flung fully open to settlement and advancement. Now there were many adequate routes traveled by thousands of settlers, but all of these paths evolved from the work of one single person. All were due to the initial efforts of Daniel Boone and of his Wilderness Road which presented the very first authentic route into the interior lands of promise.

THE ELEMENTARY SOCIAL STUDIES: SENSE AND NONSENSE IN INTEGRATION

EDWARD COLESON
Huntington College

Like many another term which has had its little day of overuse and misuse, integration has become a "bad" word to many American educators. Certainly many geographers, who somehow seem to come out on the small end of integration schemes, tend to go on the defensive at the mere mention of the word. Yet the violent anti-integrationist probably regrets the compartmentalization of knowledge quite as much as the ardent advocate of total fusion, unless he is a narrow specialist who isn't aware there are other fields beyond his own frontiers. Since the feud involves largely a question of the merit of alternative routes toward an agreed-upon goal, it would be well to examine the several approaches to determine the strengths and weaknesses of each.

THE NATURE OF LEARNING AND THE LEARNER

Perhaps the prime consideration in any curricular reform is the nature of learning itself. At once we are confronted with the

well-worn thesis that all knowledge is related—"a seamless web"—so the integrators say: "Life is whole, not pigeon-holed"—and all the rest. There are those, the doctrinaire integrators, who from this premise immediately jump to the conclusion that all the social studies *must* be served up as a single dish—an intellectual hash or salad, according to their enemies. On the other hand there are the strictly "practical" people who admit they use the fused history and geography approach on the elementary level in their system because it saves one period a day for shop or cooking, gymnasium or band. With all the pressure on the elementary school for more space for everything from the original 3 R's to foreign language, something must take the "squeeze" and the combination of two old time heavy subjects into one neat package appeals to them. Poles apart from these are the puritanical brethren who strive to keep their discipline, whatever it may be, free from any "entangling alliance," with other subjects, however much common ground there may be between them. Also whereas integration was formerly a problem for the elementary school only, it has since appeared as "cores" or problem courses in high school and "general education" on the college level. So the battle is joined and apparently the situation is going to get worse before it gets better.

A second basic consideration—many would say the first—is the nature of the learner himself. This is the familiar problem of grading: suiting the material to be taught to the interest, attention span, comprehension and, in general, the psychology of the learner at whatever level one finds him. For all the ink that has been spilled over this subject and the kindred one of providing for "individual differences," there is still much room for improvement along this line, as those of us who have struggled with the problems of how to teach those weird assortments called grades well know.

The Task of Education

A third consideration is the value of the so-called social studies in the curriculum at all. What claim do they have to space in a crowded school program? Can any one of them, perhaps history, fulfill the function that the lot of them is expected to achieve, or should our program be assorted? Precisely what do we expect of the social studies anyway? Of course, to ask in an unguarded moment what the schools are expected to accomplish is to subject oneself to a torrent of suggestions, pleas, and accusations that add

up to the idea that education is supposed to accomplish what everyone else leaves undone. And much of this colossal task is delegated to the social studies since the highly objective subjects like algebra or physics seem not to lend themselves to the purposes of reform, propaganda, or subversion.

One of the most penetrating critiques of present day education and our product, the student, is contained in *U. S. News and World Report* (February 24, 1956). Major William E. Mayer, author of the article, "Why Did Many GI Captives Cave In?" felt that we had failed "miserably in getting across the absolute fundamentals of survival in a tense and troubled international society." He then elaborates an intensive social studies program intended to produce a type of youth who is "informed . . . about his own country, his own economic and political system" and that of other nations too. And he regards this as much more important than many other things, from the basic to the frivolous, which clutter up the curriculum today. If to survive in this "modern age" the school must turn out young people—18 and 20 year olds who have a well-thought-thru philosophy of life, a "world view" that is comprehensive yet so solid that it will carry them thru the storm—the adult population, teachers, ministers, parents and politicians, will have to clear their own minds first. We can scarcely expect a stream to rise above its source. What makes it particularly difficult is that so many here in America have a vested interest in keeping the presentness as muddled as possible and politics is the art of confusing the issue. Added to that is a widespread and colossal ignorance of so many things that ought to be common knowledge that anything like straight thinking is next to impossible.

Modern Text Books and Curricula in Geography

Before attempting to suggest any changes in our present approach it would be well to evaluate just what we are now doing. If an early start helps to insure success, the future holds much promise. The "they-learn-what-they-live" people have been busy so that today the beginning phases of primary education are thought of as a laboratory experience in social living. The beginning reading books are not just to teach reading or even to tell an interesting story: they "deal with real life situations" in which children play along the street with their pets, go to school, to the department store or to grandfather's farm, and live in general

much as the young readers do. The emphasis is on the child in a social situation, the present one: hence the old tales we were brought up on are largely absent. Those of us who enjoyed James Baldwin's tales of "Hannibal Crossing the Alps," "The Gordian Knot," or "The Sword of Damocles" as a second or third grader, may regret the omission.

Much of the recent material is good and attractive and, by intent at least, very heavy in its social studies emphasis. A well known second reader takes us to a typical midwestern community, to the Kentucky Hills or their equivalent, to the eastern seaboard, etc. The third grade book of the same series takes the children across the sea to Norway, rural England, Brittany, Spain, and Africa. The pictures are attractive and the stories are fascinating to children. Stories of Holland, Switzerland, China, Latin America, etc. abound in the early grade readers, altho the pictures drawn by word and illustration of the lands and peoples tend to be somewhat stereotyped in form. The geography people have contributed their share also. Their offerings tend to consist of expositions on where the lumber, salmon, wheat or beef come from and of course represent accurate scholarship instead of the conventionalized picture the reading books tend to draw: i.e. all Dutchmen in wooden shoes and baggy trousers, and all Eskimos in igloos. The books are usually well done and beautifully illustrated, altho they may not always have the same appeal to children as the story book approach of the readers.

Both the readers and pre-geography texts make the fatal blunder of leaving maps out almost completely, thus fixing on children the pernicious habit of talking and thinking in generalities about places they have not "pictured" in space. Children can be brought up to be genuinely uncomfortable about studying an area they cannot visualize, a disembodied spirit, but one has to start them with the idea that we always orient ourselves in space as a matter of course. Then later they won't be reading history books without "seeing" the stage upon which the human drama was enacted. Visualizing an area is easier than learning to read: primitive peoples who never evolved a written language are often good cartographers. A child cannot learn to read before he can distinguish shapes, the basic ability required for "map readiness." The writer could substantiate this assertion from years of experience and experimental work if space permitted.

The fourth grade program tends to be more standardized, the "journey" or "visit" about the world. It seems that one gets the regional-anthropological approach regardless of whether one uses a geography or social studies text on this level. Beyond the fourth grade the divergence is sharp. If one uses a fifth grade social studies book, it is likely that the teacher finds herself trying to teach history from a book with no sequence of events: you study the South, Cornwallis, the cotton gin, slavery, the Civil war and T.V.A. interspersed with what passes for geography; then move on to the West where you study Spanish missions, the forty-niners, the movie industry and the water problem of Los Angeles. Any child who can piece together the human drama from such disjointed bits and scraps is a master detective: one should not expect them to learn any history from such a procedure nor does the geography seem to fare much better. The sixth and seventh grades are usually more of the same and hence do not require separate notice.

If one must combine the two subjects, preserve the time element in the history and develop the geography as the setting for the story and weave it in along the way as the so-called historical geographies usually do. But that is only what the historian should always do, and hardly disposes of the responsibility for having a good, thoro geography program too. The geographer also should note relevant historical, economic and anthropological data where indicated, which does not mean he should permit his own discipline to be submerged. This cross-referencing of related knowledge is the true integration and is the best type of "review" possible. Unfortunately, too many subject matter specialists refuse to even try to see the relationship of their field to other areas of knowledge: we can scarcely integrate knowledge in the curriculum until it is integrated in the minds of the teachers. Nor can we expect the undergraduate students to accomplish what the professors haven't done yet.

Subjects Related to Geography

There are also other elements of the present day program that are of interest to the social studies curriculum builder. One of the newest arrivals is the science program for the elementary school. While we have been fusing history and geography, science has split off as a separate subject, another "splinter" of the elementary program which tends to be fragmented too much already. Actually part of the content was borrowed from health, including

a bit of simple chemistry. The weather, climate, land forms and earth process section was once taught with geography. Nature study which we used to do seasonally in our language period makes up another portion of the course, so that relatively little is wholly new to the elementary program. Actually part of the material is still taught with the former subjects, so we end up with a hasty double treatment of the same material, which tends to be repetitious and inadequate. Nor does the above comment imply any criticism of the practice of teaching science on the elementary level: I have been doing it for years.

Another significant aspect of the elementary program of interest to social studies people is reading, as has already been noted. The average school today, which is hard pressed for room for an adequate separate course in geography and history, has time for an extensive reading program with workbooks, yet the readers are often social studies material almost exclusively. Perhaps that should make up the deficiency. However, reading is not ordinarily taught with a strong emphasis on retention; since it was not written by a professional historian or geographer, it is often not too well done from the standpoint of content; organization tends to be hit and miss according to the whims of the reading specialist, and maps are absent. It can thus be seen that the extremely crowded condition of the elementary curriculum, which is a source of frustration to every grade school teacher I know, is more a matter of faulty organization—the broad general courses which get in each other's way—than the actual quantity of subject matter we attempt to teach on the net balance. Perhaps it is about time we tried some "dis-integrating."

Integrating the Integrations

Now let us construct an elementary program in the light of the foregoing. First of all the school day should ordinarily be divided up into blocks of time of sufficient length to avoid over-fragmentation, but short enough to get away from boredom and fatigue. This will vary with the age and attention span of the children. With the present competition for space in the elementary program periods tend to become too short. I have resolved this difficulty in my own teaching by absorbing the worthwhile social studies elements of my reading program into my history or geography and the literary portion of my reading into the language or English period as

literature. Study techniques which the reading people have developed belong to all the content subjects. Reading in the middle and later elementary grades is appropriate for literature as oral interpretation. You may care to read the social studies material in the reading book aloud, but by the same token you may do so with your geography and history books. In like manner part of the science program could be absorbed.

Physiography and climate could be absorbed in geography as a unit on the local area as well as their larger implications for world geography. But, lest the reader feel that I am just another "kingdom builder" out to enlarge the domain of some favorite subject at the expense of the surrounding territory, some other alignment would do as well. All I am pleading for is a reduction in the number of "subjects" to a workable daily program that will cover the fundamentals adequately and with reasonable fullness, thus avoiding the fragmentation, superficiality and duplication which result from a plethora of overlapping courses which are all breadth and no depth.

The tragedy of our program is that we fragment what is naturally related and integrate what doesn't fit. The two natural cores of integration in the social studies are time and space, history and geography. You may organize appropriate material around each of these centers: you cannot integrate the cores because they represent opposite principles. We need to continually relate what is related, but it may be pedagogically quite unsound to wrap all knowledge up in a single package, when it destroys the organization of the subject matter. With any logical body of material as geometry this may well be fatal. Even the bringing together of a mass of related material may not ensure its integration, for, like the assimilation of food, that is a personal matter. As has been well said: "The only place integration ever takes place is under *one* hat."

THE NATIONAL COUNCIL AT WORK

The realization of the aims of the National Council for Geographic Education depends in a large measure upon the effective organization and operation of committees. The following is a list of the permanent and project committees for 1958. In most cases the functions and work of these committees can be understood and interpreted from the name of the committee. Since members of the Council or non-members may wish to direct inquiries or suggestions to the committees, the addresses of chairmen are also given. Dr. Adelbert K. Botts, First Vice President, will handle the direct contacts with the permanent and project committees and report to the President on all projects and progress.

Permanent Committees

Research Funds: Nels Bengtson, Chairman, University of Nebraska, Lincoln, Nebraska, Frances M. Hanson, Gilbert White, Mildred Dunklefsen, John H. Garland.

Distinguished Service Award: Howard Martin, Chairman, University of Washington, Seattle, Washington, Alfred Meyer, Melvina Svec, Norah E. Zink, Ina Cullom Robertson, Ex-officio John W. Morris, and Mary Viola Phillips.

Planning: Henry J. Warman, Clark University, Worcester, Massachusetts, Norman Carls, Melvina Svec, Otis Freeman, Ina Cullom Robertson, Ex-officio John W. Morris, Mary Viola Phillips, Adelbert K. Botts.

Project Committees

Conservation (Resource Use) Education: Sisgismond de R Diettrich, Chairman, University of Florida, Gainesville, Florida, Thomas W. Chamberlin, Sam Clagg, J. Sullivan Gibson, Thelma Flavin, Nicholas Helbron, Ella Keene, Oliver Laine, Ruben L. Parson, George T. Renner III, Francis Schadegg.

Survey of Geographic Education Research: Paul Griffin, Chairman, Stanford University, Stanford, California, Martha Curry, R. S. Funderburk, Hildegard Binder Johnson, Lorrin Kennamer.

Television in Geographic Education: Jewell Phelps, Chairman, George Peabody College for Teachers, Nashville, Tennessee, Robert E. Cramer, Mildred Dunklefsen, Kenneth P. Hayden, Leonard I. Kuntz, Robert Redden, Alfred Sumner, John H. Walker, Henry J. Warman.

Tests: Bernice Casper, Chairman, State Teachers College, Trenton, New Jersey, F. Douglas Hammond, Frank W. Sorenson, Ruth H. Stanley, Adelle Zigrang.

Publication "Careers in Geography": Lorrin Kennamer, Chairman, University of Texas, Austin, Texas, Wilhelmina Hill, John Bonham, Helen White, Phillip Bacon, Melvina Svec.

How To Do It Series: Mamie L. Anderzhon, Chairman, William Beye School, Oak Park, Illinois.

National Exhibit of Student Projects: Virginia Morrison, Chairman, Reading Public Schools, Reading, Pennsylvania, Katherine Montgomery, Dorothy Pero, Eugene Baxter, Julia Loya, Irene McKelvey, Leona Playfoot.

Geographic Education Service Center for Teachers of Geography: Norman Carls, Chairman, University of Pittsburgh, Pittsburgh, Pennsylvania, Gilbert White, Co-Chairman, University of Chicago, Chicago, Illinois.

NCGE Advisory Committee for I.G.U. Report: Clyde F. Kohn, Chairman, Northwestern University, Evanston, Illinois, Margaret Carlson, Mamie Anderzhon, Adah Flemington, Herbert Gross.

The following new committees were added at the Board Meeting in St. Louis:

Parson's Award Committee: Norman Carls, Chairman, University of Pittsburgh, Pitts-

burgh, Pennsylvania. A periodic award is to be given for an article appearing in a popular medium which is most effective in informing the lay public of what geography really is/or why geography should be more prominent in the American Educational System.

Committee to Ascertain the Avaliability of Topographic Maps: Lyle Fletcher, Chairman, Bowling Green State University, Bowling Green, Ohio, George Corfield, Cyril Stone.

Appointments and progress reports of committees will be announced in forthcoming issues of the JOURNAL.

MARY VIOLA PHILLIPS, *President*

NATIONAL COUNCIL AT WORK*
(Intended for March issue)

The National Council for Geographic Education will hold its Forty-Fourth Annual Meeting Friday and Saturday, November 28 and 29 at the Hotel Statler, New York City, New York. The central theme for the program is "Widening Horizons Through Geographic Education." If any of our members living in the New York City area are interested in helping with the local arrangements, please contact Dr. Phillip Bacon, Chairman of Local Arrangements, Teachers College, Columbia University, New York City, New York.

The Chairman of the Committee on Student Exhibits, Virginia Morrison, Reading Public Schools, Reading, Pennsylvania, is planning a sectional meeting with a display of student made exhibits for the NCGE annual meeting.

The members of the Pennsylvania Council for Geography Teachers and its affiliated Junior and Adult Clubs will sponsor banquet dinners for representatives of United Nations at the NCGE Annual Meeting.

Jewell Phelps, George Peabody College for Teachers, Nashville, Tennessee, has consented to serve as chairman of the NCGE Nominating Committee. Offices of the National Council for Geographic Education to be filled by election in November 1958 are: First Vice President (President-elect); Second Vice President; Secretary; Treasurer; and three new members of the Executive Board. The chairman of the Nominating Committee will welcome your recommendations.

Adelbert K. Botts, First Vice President, State Teachers College, New Jersey and Arnold J. Kreisman, Geographer, Aero Service Corporation, Philadelphia will represent the National Council at the Sixty-second Annual Meeting of the Academy of Political and Social Science to be held at the Warsick Hotel, Philadelphia, Pennsylvania, April 11 and 12, 1958. The topic to be discussed is "Asia and Future World Leadership."

Reports on Committees and the NCGE annual meeting will appear in forthcoming issues of the JOURNAL.

MARY VIOLA PHILLIPS, *President*

* The president, Miss Phillips, submitted this material in time for the March issue and it went with the galleys for the March issue. The package was lost. We had to send duplicates but did not have a duplicate of the National Council at Work page.

GEOGRAPHICAL PUBLICATIONS

Katheryne Thomas Whittemore, **The United States and Canada, $4.48.**

This is an excellent presentation of geography, some history and historical geography, on the fifth grade level. The plan of study makes the regional concept on a use basis very clear to the pupil in words as well as maps.

Contrary to the popular approach the United States study begins with the agricultural interior, progresses westward, includes Alaska and Hawaii and concludes with the industrial east. The industrial presentation is continued into Canada and the Canadian study is completed with the sparsely populated areas.

The text has a vivid style, as if the author had made each observation personally. New terms are italicized and carefully explained.

Marguerite Uttley and Alison E. Aitchison, **Latin America, Africa, and Australia.** Land and Peoples of the World Series. Ginn and Company, Boston, $4.48.

This sixth (or perhaps seventh) grade text is a monumental geographic and historical geographic work of about 400 pages, 3/5 devoted to Latin America, 1/4 to Africa and the remainder includes Australia and New Zealand (as point of departure Antarctica is added to the latter).

The treatment of materials is in part regional, in part systematic. The basis for regions varies. In Latin America there are use regions within the major countries. In Africa the regions are Northern, Central and Southern Africa, with agricultural regions delimited within the latter. The treatment of the Caribbean "banana lowlands," "coffee highland," "minerals," "sugar islands" and Australia "Wool, the Chief Basis of Australia's Prosperity" and "Food in Abundance" are systematic. One can appreciate the authors problems in view of the areal extent covered by the text. However, the treatment of materials is an excellent example of the contribution geography makes to an understanding of why people live as they do.

The basic maps of these texts are physical-political with relief featured. (A word of caution: unless lighting is "true," mountains in the west on the two United States maps may appear as depressions). Whether a continental or regional map, an inset on the same page orients the reader in world or continental position. Other maps are of population, crops, minerals, climate, vegetation, and transportation. Specific mention must be made of the detailed maps of urban areas. Whether it is the Texas coast from Houston-Galveston to Beaumont-Port Arthur, or São Paulo, Brazil, the portrayals have magnificently helped in clarifying geographic understanding. Rainfall and commodity graphs add to the usefulness of the text. Scale drawings of farm layout and crops (including fencing) provide much material for comparison. The weli chosen pictures add to the authenticity and teaching value. The use of color in maps and illustrations helps to produce most attractive texts.

Both books are a forward step in geographic education. What a joy it would be to have students with these backgrounds on the college level.

Teachers' manuals (almost a must for the geographically unprepared teachers) and workbooks are to be available soon.

ANNEMARIE KRAUSE

Southern Illinois University

Zoe Thralls. **The World Around Us.** Harcourt, Brace and Company, New York, Chicago, 1956. 480 pages with contents, maps, tables and index. $4.36.

Here is a book written by a teacher of teachers who is thoroly acquainted with the

minds of junior high school pupils. *The World Around Us* is an answer to the needs of these pupils and their teachers. Few of the criticisms generally made of geography texts apply to this one. It is not lengthy; the language is not difficult; and the organization is not complicated. It is written in simple graphic sentences. Geographic terms are carefully introduced, each at the time and place in which it is needed, and clearly defined. The content is focused on present day times and places and offers a challenge to any teen-age or adult person interested in how men live and why they live as they do.

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North Texas State College

Myrick and Barbara Land. **Jungle Oil.** Coward-McCann, Inc., New York, 1957. 96 pages with illustrations and index. $1.95.

A story of treasure hunters who thru the ages have come to Venezuela seeking many kinds of treasure. The Indians who wished to find a place where they could live comfortably and where game would be plentiful walked barefoot over a fortune of oil. The Spaniards were looking for the fabled El Dorado and Devil's Mountain was used only as a landmark.

With the progress of the world in the past century, man has found need for many of Venezuela's treasures that for many years had been by-passed. Need of kerosene for lights and of gasoline for automobiles brought trained treasure hunters to Venezuela. The sticky, black fluid was examined and a simple explanation was found for the strange behavior of Devil's Mountain. Now the taxes on oil brings in about $500,000,000 a year and the iron ore is helping feed the hungry steel mills of the United States.

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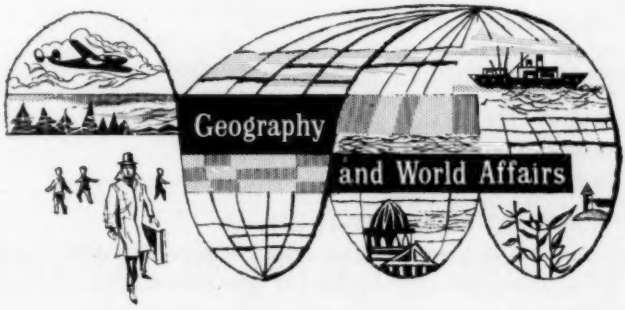

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Editorial Notes and News

How about hiring a young professor from India to teach for a year in your geography department? There are a few young men in India with Ph.D.'s in geography from American universities who would like to teach in American universities. For example, Dr. Sitanshu Mookerjee, Office of Special Duty, National Atlas Organization, Calcutta University, Senate House, Calcutta 12, India is interested in returning to teach in the United States. He received his Ph.D. in geography at Indiana University in June, 1955. He was head of the Department of Geography, Nagpur University, Nagpur, India for two years. There are twelve members on the geography staff at Nagpur. Then during the present year he is on leave from Nagpur University in order to work for a National Atlas Organization. The *National Atlas of India* (Preliminary Hindu Edition, 1957) is now published and he is free to come to America. If you are interested in employing Dr. Mookerjee write directly to him or to the editor.

Dr. Karen, another young man from India who also received his doctorate in geography at Indiana University accepted a one year's teaching position at the University of Kentucky in September, 1956 and is now teaching his second year there.

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By **C. LANGDON WHITE, GEORGE T. RENNER,** and **ROBERT T. NOVAK.** Written primarily for those students who wish only a one-semester course in college geography, this introductory geography text deals with man's relation to all of the elements of his natural environment; the subject matter covers both the features of the natural earth (climate, land forms, soils, natural vegetation, etc.) and the cultural features as exemplified by man in his occupance of the earth. The text is effectively illustrated with maps, diagrams, and photographs.

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EDITORIAL NOTES AND NEWS

In order to encourage the young women of this country to train in this important field, the Society of Woman Geographers is offering one of its Adelène Moffat Fellowships of $2300 to a young woman to do graduate work in Geography at Clark University for the academic year 1958-1959.

An announcement describing the graduate courses in Geography and the requirements for the Master of Arts and Doctor of Philosophy degrees, application blanks for this fellowship, and any further information may be obtained by writing to Director, Graduate School of Geography, Clark University, Worcester 10, Massachusetts.

Did you know you could buy microfilms of volumes of the JOURNAL OF GEOGRAPHY? A microfilm of Volume 54 (1955) costs $1.60 and Volume 55 (1956) costs $2.00. You may secure these microfilms by writing to University Microfilms, 313 North First Street, Ann Arbor, Michigan.

Type is now being set on the INDEX to the JOURNAL OF GEOGRAPHY (1922-1956). This INDEX will make a book of approximately 270 pages. It is proposed that the hard back copies of this publication sell for $5.00 each and that paper back copies be sold to non-members for $4.00 each. Members of the organization can purchase the INDEX for $3.00 per copy, or at only a little above the cost of publication. It would be appreciated if you will notify the Secretary should you not consider the above rates satisfactory.

Professional Paper No. 16 by Dr. Shaw is now available for distribution. If you know of persons you think should receive copies of this paper, please write to the Secretary, Dr. John W. Morris, Department of Geography, University of Oklahoma, Norman, Oklahoma. Professional Paper No. 17 by Dr. Bacon is now in press and will be ready for distribution during April. Professional Papers 18 and 19 by Dr. Coleson and Dr. Warman will be published between now and the first of July.

Plans for the Forty-fourth Annual Meeting to be held at the Hotel Statler, New York City, November 28-29, 1958 are well underway. The general theme for the meeting is "Widening Horizons Through Geographic Education." The program highlights are:

Geographic Education Around the World
Geographic Education Across the Curriculum
Focus on Regions of Increasing Importance
Tolls and Techniques for Teaching World Regions
Geography and the IGY
Distinguished Visitors from the United Nations
Field Trips and Exhibits

Look for a more detailed progress report of the New York City meeting in the May issue of the JOURNAL OF GEOGRAPHY.

The Fellowship Committee unanimously recommended that the Albert J. Nystrom Memorial Fellowship for Advanced Study in Improving the Teaching of Geography in Elementary and Secondary Schools be awarded for 1958-59 to Miss Berenice Margaret Casper. The award of $2,400 is to be granted annually to the best qualified applicant pursuing a program of research and writing leading to a Doctoral dissertation on some aspect of the teaching of Geography.

Miss Casper received the B.Sc. (1937) and M.A. (1941) at the University of Nebraska, and took additional graduate work in Geography at the Universities of Wisconsin and Pennsylvania as well as at McGill University. She is now a candidate for the Ed.D. degree in Secondary Education at the University of Nebraska. The title of her dissertation is "The Scope and Sequence of Geographic Education in the Curriculum of Grades Four thru Twelve."

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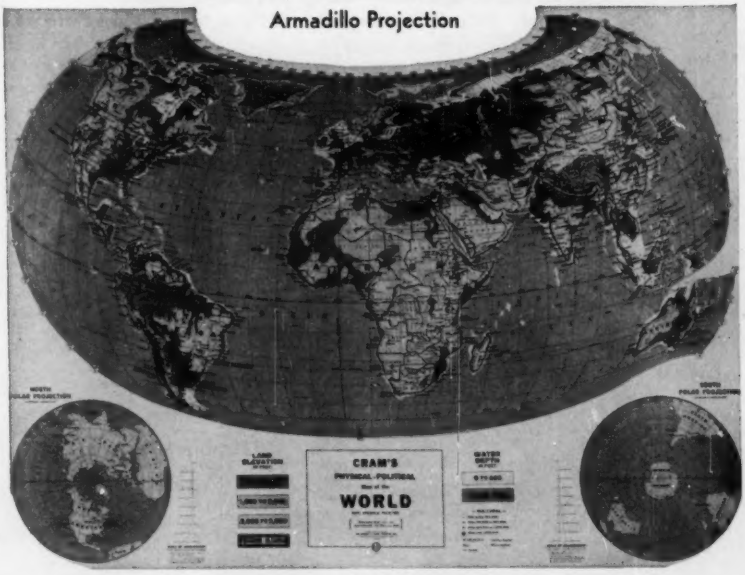

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GEOGRAPHICAL PUBLICATIONS

Dr. George Kish. **Life in Europe: Italy.** The Fideler Co., Grand Rapids 2, Michigan, 1957. 160 pages with 142 photographs and maps. Glossary and index. $3.28 per single copy—$2.46 for five or more.

Life in Europe: Italy is a noteworthy addition to the Fideler series. Using the experience gained from extensive travels in Europe and from a full year recently spent in Italy, Dr. Kish presents an authentic, up-to-date account.

Like others in the series, this book is designed to provide enrichment material for students in middle or upper grades. It achieves this thru a skillful combining of pictures, maps, and text, with emphasis on pictures slightly outweighing that on textual material.

This extensive use of pictures and maps—142 in all—enables even the reluctant reader to acquire a basic knowledge of present-day Italy. Ranging in subject matter from Roman ruins to modern Italian assembly lines, the pictures, complemented by the concise text material, present every major phase of Italian physical and cultural geography.

The organization is topical, each of the sixteen chapters devoted to an important subject, such as, "Land," "Climate," "People," with maps spaced advantageously thruout.

For most students the textual material is readable, but for some the frequent appearance of proper nouns and foreign phrases will prove an obstacle. The glossary is helpful for definitions, but the phonetic spelling provided is hard to decipher.

Superior sixth-grade students asked to evaluate the book manifested genuine enthusiasm over the wealth of information they acquired from the pictures. They thought all the maps, except one concerning drainage of Europe, were practical. They had only one suggestion, "Why not use some colored pictures?"

Teachers who become acquainted with the book will probably echo their praise. As enrichment material the book is a good investment.

SISTER MARMION I.H.M.

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R. J. Harrison Church. **West Africa. A Study of the Environment and of Man's Use of it.** Longmans, Green and Co., London and New York, 1957. xxvii and 547 pages. 89 maps and diagrams, and 121 photographs. index. $8.75.

Dr. Church has provided a scholarly and readable volume on West Africa which fills the need for a general geography of the region. Other books on the area are available, but they are in languages other than English, cover only a portion of West Africa or a restricted range of topics, or are obsolete. The author skillfully combines broad generalizations with summaries of detailed studies in a style that should be interesting to the college student or geography teacher, as well as to the specialist on Africa.

The first two parts of the book describe the region as a whole on a systematic basis. Part One, consisting of five chapters, deals with the physical setting, including geology, relief and drainage, climate, vegetation and soils. The second five chapters form Part Two on resources and their development. The topics are agriculture, livestock and fisheries, minerals and power, transport, and population distribution and movements.

Part Three has eighteen chapters which describe and analyse West Africa by political units, beginning with Senegal and continuing eastward to conclude with Spanish Guinea and the Portuguese Province of Sao Thome and Principe. Dr. Church shows that political control and commercial policy are important items in determining the differences in development among such areas as Liberia, the Ivory Coast, and Nigeria, along with physical and cultural factors. The result is a clear and well-balanced picture of the environment and how man uses it. This is one of the best regional geographies to appear in recent years.

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Beautiful, graphic maps have been prepared by the outstanding cartographer, Allan K. Philbrick of Michigan State University. As a special feature new to texts in political geography, vivid illustrations in the form of photographs have also been provided.

Pub. March 1958

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THE PATTERN OF ASIA

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